

Classified

RATES PER LINE

Positions Wanted: first insertion \$1.75, additional insertions \$1.50.
Positions Available: Services, Supplies, Courses, and Announcements: first insertion \$3.50, additional insertions \$2.75.
Student Opportunities: first insertion free, additional insertions \$1.50.

There are no discounts or commissions on classified ads. Any type of style that is not publisher's choice is charged for at general advertising rates. Ads are published weekly on Tuesday. Ads must be received in writing on Monday, 1 week prior to the date of publication.

Replies to ads with box numbers should be addressed to Box _____, American Geophysical Union, 2000 Florida Avenue, N.W., Washington, D.C. 20009.

For further information, call toll free 800-424-8488 or, in the Washington, D.C. area, 462-6905.

POSITIONS WANTED

Geochronologist/Geologist. Ph.D. 6 years of experience in trace element geochemistry, volcanology, hydrothermal processes, water-rock interaction, with field/lab techniques on land or at sea. Also teaching experience at university level. Seeks Research/Teaching/Industrial position in the Washington, D.C. area. Resume on request. American Geophysical Union, 2000 Florida Avenue, N.W., Box 010, Washington, D.C. 20009.

POSITIONS AVAILABLE

Post-Graduate Appointments/University of Nevada. The Water Resources Center of the Desert Research Institute anticipates several post-doctoral or post-masters appointments in the following areas:

- hydrogeology
- hydrology
- soil physics
- geophysics (electrical and acoustic)
- geostatistics
- isotope hydrology
- hydraulic engineering
- quaternary geology

These appointments will be for one year but may be extended to two years depending upon specific project assignment and continuation of grant and contract funding. Applications will be accepted until positions filled. Candidates should submit resume, transcripts, and three letters of reference to: Personnel Office, Desert Research Institute, University of Nevada System, P.O. Box 60220, Reno, NV 89506.

Equal Opportunity/Affirmative Action Employer.

The Johns Hopkins University/Quantitative Meteorological Geologist. The Department of Earth and Planetary Sciences invites applications for a tenure-track faculty position in quantitative aspects of meteorology/physics, effective July 1, 1984. The appointee will be expected to develop an innovative research program, and responsibilities will include undergraduate and graduate teaching and the supervision of doctoral candidates. Strong theoretical background and research record in the chemical, isotopic, or physical aspects of meteorology are required, as is the Ph.D. degree. Field experience is also desirable. Applications from women and minority candidates are encouraged.

To apply, send curriculum vitae, publications list, and the names of at least three references to: Dr. David R. Yehle, Dept. of Earth and Planetary Sciences, The Johns Hopkins University, Baltimore, MD 21218. Application deadline is January 15, 1984.

The Johns Hopkins University is an equal opportunity, affirmative action employer.

The Planetary Plasma Environment: A Comparative View

Ahwahnee Lodge, Yosemite, California

January 30 - February 3, 1984

Co-Chairmen: P. M. Banks, C. R. Chappell, A. F. Nagy

Co-Convenors: C. R. Clauer, J. H. Waite

The 1984 Yosemite Conference will address comparative aspects of planetary plasma environments. Emphasis will be placed on the comparison of plasma sources and energization processes which exist in the inner and outer planets, as well as in comets. The effects of these plasma and energy sources on the composition and dynamics of planetary and cometary magnetospheres will be examined.

All oral presentations will be invited papers. Ample time (50%) will be reserved for discussion. Impromptu presentation of relevant material is encouraged. All contributed papers will be presented during two evening poster sessions. The meeting will be limited to approximately 100 participants.

For more information on abstract submission and meeting registration please contact: C. Robert Clauer, STAR Laboratory, SEL, Stanford University, Stanford, California 94305. Telephone: (415) 497-4691.

Abstract Deadline: December 1, 1983

Pre-Registration Deadline: January 10, 1984

Faculty Position/Arizona State University Department of Geology. Applications are invited for an anticipated tenure-track faculty position at the assistant professor level, beginning in August of 1984. The selected candidate will be expected to display excellence in teaching and to develop a vigorous program of research on important geological problems. Possible research areas which would complement or extend existing strengths in the department include solid earth geophysics, geology, geology, and mineral physics.

Please send a detailed statement of research and teaching interests and a resume with names of four references by January 15, 1984 to: Paul South, Chairman, Department of Geology, Arizona State University, Tempe, AZ 85287.

Arizona State University is an equal opportunity/affirmative action employer.

University of North Dakota/Research Faculty Position. The Center for Aerospace Sciences at the University of North Dakota has an immediate opening for a research faculty position. The successful applicant will take an active role in measurement programs with research aircraft as well as analysis of the data in conjunction with ongoing research contracts at UND. The position requires a M.S. and Ph.D. preferred in Atmospheric Science with a strong background in Cloud Physics. Experience in computer programming and aircraft measurements is highly desirable.

The Center for Aerospace Sciences is experiencing rapid growth and is actively involved in atmospheric research. Research facilities include a 5 cm digital mobile radar unit, automatic rawinsonde equipment, a dedicated computer facility, a Cessna 441 turboprop, a Cessna 441 jet, and other support equipment.

Salary is commensurate with experience, qualifications, and rank. This is a non-tenure track position at the Assistant/Associate professor level dependent upon applicant and availability of funds. Position is for 12 months (renewable annually effective July 1).

Qualified applicants are encouraged to send resume to: Dr. C.A. Grainger, Center for Aerospace Sciences, Box 8210 University Station, Grand Forks, ND 58202.

The University of North Dakota offers an attractive benefits package, retirement plan, and excellent working conditions. The University of North Dakota is an equal opportunity employer.

Slidway Institute of Oceanography/Oceanographer. Several Technical research positions are open for a M.S. in physical or chemical oceanography. The successful candidate will assist in the collection and analysis of hydrographic data from a variety of regions. The candidates must have experience in one or more of the following: oceanographic data collection techniques, nutrient analysis (fautonage), data reduction and analysis, and programming systems and/or FORTRAN. A demonstrated ability in scientific writing is required of any candidate. Salary is negotiable depending on experience. Please send resume including brief description of practical experience and the names of three references to:

Dr. Larry P. Atkinson
 Slidway Institute of Oceanography
 P.O. Box 12067
 Savannah, Georgia 31416

North Dakota State Water Commission/Geohydrologist. To work in aquifer evaluation and management. Bachelor's degree with two years experience or masters degree with experience in aquifer techniques required. Background in hydrogeology, soil physics or unsaturated flow processes desired. Salary range \$13,555-\$22,774 per month. Send resume to:

North Dakota State Water Commission
 Hydrology Division
 500 East Boulevard
 Bismarck, North Dakota 58505

North Dakota State Water Commission is an equal opportunity/affirmative action employer.

HANFORD

Hanford Operations in Washington

Rockwell International has several excellent opportunities at the Hanford Reservation in Richland, Washington:

Geophysicist

You'll plan, oversee and interpret geophysical exploration investigations in support of the Basalt Waste Isolation Project. Minimum 7 years experience and broad experience integrating various geophysical and geological data is required.

Mineralogist-Petrologist

You'll plan, oversee and interpret investigations of secondary mineral occurrences in basalt and sediments in support of the Basalt Waste Isolation Project. Advanced degree and minimum 3 years experience in clay or zeolite mineralogy required.

An outstanding compensation and benefits package, including relocation assistance, complements an appealing location. For consideration, please send your resume to:

B.E. White (B15-EOS), Hanford Operations, Rockwell International, P.O. Box 800, Richland, WA 99352. Equal Opportunity Employer M/F. U.S. Citizenship Required.



Rockwell International

...where science gets down to business

Instructor/Assistant Professor in Meteorology January 15, 1984—State University of New York College at Albany. The Department of Earth Atmospheric, and Planetary Sciences has an opening for a junior or senior faculty member in meteorology. The successful candidate will be expected to teach and supervise students in the department. The candidate should have a strong interest in obtaining and analyzing geophysical and meteorological data and be prepared to participate in studies. Specializations could include topics in atmospheric physics or fluid mechanics, cloud microphysics, basin evolution of paleoclimatology. The candidate would be expected to interact with such fields in the department as geophysics, meteorology, marine geology and geophysics, sedimentology, or chemical oceanography, and to participate in the Joint Program in Oceanography with the Woods Hole Oceanographic Institution.

Applicants should submit resume and list of references by November 15, 1983 to:

William F. Bauer
 Chairperson
 Dept. of Earth, Atmospheric,
 and Planetary Sciences
 215-216, M.I.T.
 Cambridge, MA 02139

M.I.T. is an Equal Opportunity/Affirmative Action Employer.

The University of Texas at Dallas/Sedimentary Geology. The Geosciences Program at the University of Texas at Dallas is seeking two dynamic individuals for two tenure track positions in the general field of sedimentary geology (fourth and fifth class) to begin September 1984. Areas of specialization are open but could include any of the following: sedimentary environments, petrography/diagenesis, paleogeography, tectonics, petroleum geology, stratigraphy. Our goal is to build an interactive group in sedimentary geology that complements existing strengths in micropaleontology, tectonics, geochronology, tectonics and geophysics. Rank and salary are open to the appointment level will be with the candidates' experience. The positions require a Ph.D. and a strong commitment to excellence in research and teaching. Teaching duties will involve advanced undergraduate and graduate courses in the area of sedimentary geology, possible participation in field camp, and supervision of M.S. and Ph.D. students.

UTD is a relatively new (13 years old) urban university that was formed from the nucleus of a research institution (Southwest Center for Advanced Studies). The campus is located near to three oil company research laboratories. Major facilities within the Geosciences Program include: Pione 350 computer with array processor, automated electron microprobe, SEM, two solid-state mass spectrometers, high-pressure, high temperature apparatus for experimental petrology and rock deformation, and organic geochemical laboratory. Applicants should send a letter outlining specific research interests, a resume (indication of sex and ethnicity for Affirmative Action statistical purposes is requested but not required) and names of three references to:

Academic Search # 363
 The University of Texas at Dallas
 P.O. Box 830688
 Richardson, Texas 75083-0688

Applications should be received by February 1, 1984. The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

Physical Oceanographer/University of Delaware. The College of Marine Studies invites applications for a tenure-track position in physical oceanography. It is anticipated that the appointee will be at the assistant professor level, but applications from more senior persons should be accepted. Applicants should have background in coastal or estuarine physical oceanography, with experience in observational work as well.

Teaching at the graduate level will be required, and the successful candidate will be expected to develop a funded research program involving graduate students.

Applicants should send curriculum vitae, pertinent reprints, and the names of four references to: Dr. Ferris Webster, Oceanography Program, College of Marine Studies, University of Delaware, Lewes, Delaware 19558. (Telephone 302/645-3468)

The closing date for applications is 30 November 1983.

The University of Delaware is an Equal Opportunity employer which encourages applications from qualified minority groups and women.

Massachusetts Institute of Technology/Marine Geology and Geophysics. The Department of Earth Atmospheric, and Planetary Sciences has an opening for a junior or senior faculty member in marine geology and geophysics. The candidate should have a strong interest in obtaining and analyzing geophysical and meteorological data and be prepared to participate in studies. Specializations could include topics in atmospheric physics or fluid mechanics, cloud microphysics, basin evolution of paleoclimatology. The candidate would be expected to interact with such fields in the department as geophysics, meteorology, marine geology and geophysics, sedimentology, or chemical oceanography, and to participate in the Joint Program in Oceanography with the Woods Hole Oceanographic Institution.

Applicants should submit resume and list of references by November 15, 1983 to:

William F. Bauer
 Chairperson
 Dept. of Earth, Atmospheric,
 and Planetary Sciences
 215-216, M.I.T.
 Cambridge, MA 02139

M.I.T. is an Equal Opportunity/Affirmative Action Employer.

Structural Geology/Tectonics, University of Michigan. The Department of Geological Sciences is seeking a tenure-track or tenure position. The successful candidate will be expected to teach and supervise students in the department. The candidate should have a strong interest in obtaining and analyzing geophysical and meteorological data and be prepared to participate in studies. Specializations could include topics in atmospheric physics or fluid mechanics, cloud microphysics, basin evolution of paleoclimatology. The candidate would be expected to interact with such fields in the department as geophysics, meteorology, marine geology and geophysics, sedimentology, or chemical oceanography, and to participate in the Joint Program in Oceanography with the Woods Hole Oceanographic Institution.

Applicants should submit resume and list of references by November 15, 1983 to:

Academic Search # 363
 The University of Texas at Dallas
 P.O. Box 830688
 Richardson, Texas 75083-0688

Applications should be received by February 1, 1984. The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

Physical Oceanographer/University of Delaware. The College of Marine Studies invites applications for a tenure-track position in physical oceanography. It is anticipated that the appointee will be at the assistant professor level, but applications from more senior persons should be accepted. Applicants should have background in coastal or estuarine physical oceanography, with experience in observational work as well.

Teaching at the graduate level will be required, and the successful candidate will be expected to develop a funded research program involving graduate students.

Applicants should send curriculum vitae, pertinent reprints, and the names of four references to: Dr. Ferris Webster, Oceanography Program, College of Marine Studies, University of Delaware, Lewes, Delaware 19558. (Telephone 302/645-3468)

The closing date for applications is 30 November 1983.

The University of Delaware is an Equal Opportunity employer which encourages applications from qualified minority groups and women.

USDA Agricultural Research Service,

Watershed Erosion Research Unit,
 Tucson, Arizona . . .

... is seeking a Hydrologist or Research Hydraulic Engineer to conduct research in hydrology, erosion and sediment yield, and water quality in land resource areas of the southwest. Permanent Federal position. Must be US citizen. Salary range \$24,508-\$48,553 (commensurate with experience). Interested applicants should contact Dr. Kenneth Renard at 602/629-6037 for additional information and application procedures.

USDA is an Equal Opportunity/Affirmative Action Employer.

Geochronologist/University. Invites applications for a tenure track position in geology (fourth and fifth class) to begin September 1984. Areas of specialization are open but could include any of the following: sedimentary environments, petrography/diagenesis, paleogeography, tectonics, petroleum geology, stratigraphy. Our goal is to build an interactive group in sedimentary geology that complements existing strengths in micropaleontology, tectonics, geochronology, tectonics and geophysics. Rank and salary are open to the appointment level will be with the candidates' experience. The positions require a Ph.D. and a strong commitment to excellence in research and teaching. Teaching duties will involve advanced undergraduate and graduate courses in the area of sedimentary geology, possible participation in field camp, and supervision of M.S. and Ph.D. students.

UTD is a relatively new (13 years old) urban university that was formed from the nucleus of a research institution (Southwest Center for Advanced Studies). The campus is located near to three oil company research laboratories. Major facilities within the Geosciences Program include: Pione 350 computer with array processor, automated electron microprobe, SEM, two solid-state mass spectrometers, high-pressure, high temperature apparatus for experimental petrology and rock deformation, and organic geochemical laboratory.

Applicants should send a letter outlining specific research interests, a resume (indication of sex and ethnicity for Affirmative Action statistical purposes is requested but not required) and names of three references to:

Academic Search # 363
 The University of Texas at Dallas
 P.O. Box 830688
 Richardson, Texas 75083-0688

Applications should be received by February 1, 1984. The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

Hydrologist/University of Illinois at Urbana-Champaign. The Department of Geology is seeking a tenure-track or tenure position. The successful candidate will be expected to teach and supervise students in the department. The candidate should have a strong interest in obtaining and analyzing geophysical and meteorological data and be prepared to participate in studies. Specializations could include topics in atmospheric physics or fluid mechanics, cloud microphysics, basin evolution of paleoclimatology. The candidate would be expected to interact with such fields in the department as geophysics, meteorology, marine geology and geophysics, sedimentology, or chemical oceanography, and to participate in the Joint Program in Oceanography with the Woods Hole Oceanographic Institution.

Applicants should submit resume and list of references by November 15, 1983 to:

Academic Search # 363
 The University of Texas at Dallas
 P.O. Box 830688
 Richardson, Texas 75083-0688

Applications should be received by February 1, 1984. The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

Hydrologist/University of Illinois at Urbana-Champaign. The Department of Geology is seeking a tenure-track or tenure position. The successful candidate will be expected to teach and supervise students in the department. The candidate should have a strong interest in obtaining and analyzing geophysical and meteorological data and be prepared to participate in studies. Specializations could include topics in atmospheric physics or fluid mechanics, cloud microphysics, basin evolution of paleoclimatology. The candidate would be expected to interact with such fields in the department as geophysics, meteorology, marine geology and geophysics, sedimentology, or chemical oceanography, and to participate in the Joint Program in Oceanography with the Woods Hole Oceanographic Institution.

Applicants should submit resume and list of references by November 15, 1983 to:

Academic Search # 363
 The University of Texas at Dallas
 P.O. Box 830688
 Richardson, Texas 75083-0688

Applications should be received by February 1, 1984. The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

Hydrologist/University of Illinois at Urbana-Champaign. The Department of Geology is seeking a tenure-track or tenure position. The successful candidate will be expected to teach and supervise students in the department. The candidate should have a strong interest in obtaining and analyzing geophysical and meteorological data and be prepared to participate in studies. Specializations could include topics in atmospheric physics or fluid mechanics, cloud microphysics, basin evolution of paleoclimatology. The candidate would be expected to interact with such fields in the department as geophysics, meteorology, marine geology and geophysics, sedimentology, or chemical oceanography, and to participate in the Joint Program in Oceanography with the Woods Hole Oceanographic Institution.

Applicants should submit resume and list of references by November 15, 1983 to:

Academic Search # 363
 The University of Texas at Dallas
 P.O. Box 830688
 Richardson, Texas 75083-0688

Applications should be received by February 1, 1984. The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

Hydrologist/University of Illinois at Urbana-Champaign. The Department of Geology is seeking a tenure-track or tenure position. The successful candidate will be expected to teach and supervise students in the department. The candidate should have a strong interest in obtaining and analyzing geophysical and meteorological data and be prepared to participate in studies. Specializations could include topics in atmospheric physics or fluid mechanics, cloud microphysics, basin evolution of paleoclimatology. The candidate would be expected to interact with such fields in the department as geophysics, meteorology, marine geology and geophysics, sedimentology, or chemical oceanography, and to participate in the Joint Program in Oceanography with the Woods Hole Oceanographic Institution.

Applicants should submit resume and list of references by November 15, 1983 to:

Academic Search # 363
 The University of Texas at Dallas
 P.O. Box 830688
 Richardson, Texas 75083-0688

Applications should be received by February 1, 1984. The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

Hydrologist/University of Illinois at Urbana-Champaign. The Department of Geology is seeking a tenure-track or tenure position. The successful candidate will be expected to teach and supervise students in the department. The candidate should have a strong interest in obtaining and analyzing geophysical and meteorological data and be prepared to participate in studies. Specializations could include topics in atmospheric physics or fluid mechanics, cloud microphysics, basin evolution of paleoclimatology. The candidate would be expected to interact with such fields in the department as geophysics, meteorology, marine geology and geophysics, sedimentology, or chemical oceanography, and to participate in the Joint Program in Oceanography with the Woods Hole Oceanographic Institution.

Applicants should submit resume and list of references by November 15, 1983 to:

Academic Search # 363
 The University of Texas at Dallas
 P.O. Box 830688
 Richardson, Texas 75083-0688

Chairman, Department of Oceanography/Old Dominion University. Due to an internal promotion of the former Chair, the Dept. of Oceanography is now seeking a new Chair. Applications are invited from persons with an excellent academic record, experience, and a record of quality research and publication in oceanography. Some administrative experience is desirable, but not mandatory. Old Dominion University is a state-supported university. Oceanography is a priority program offering M.S. and Ph.D. degrees with concentrations in biological, chemical, geological, and physical oceanography. Some undergraduate degree courses are also offered. The departmental emphasis is on graduate teaching and research. The department has at present, 12 faculty and 70 students. This position is state supported and will be a permanent position. Salary will be approximately \$21,000 depending upon experience and publications. Preference will be given to recent Ph.D.s. No moving expenses can be paid. Send names and three references, biographical material, including a list of publications, copies of pertinent publications, abstract of dissertation, and a statement of research interests for the duration of the fellowship to: Dr. LeRoy M. Dorman, Chairman, Geological Research Division, A-420, Scripps Institution of Oceanography, La Jolla, CA 92093. Deadline for applications is January 15, 1984.

The University of California, San Diego, is an equal opportunity/affirmative action employer.

The University of Texas at Dallas/Sedimentary Geology. The Geosciences Program at the University of Texas at Dallas is seeking two dynamic individuals for two tenure track positions in the general field of sedimentary geology (carbonates and/or clastics) to begin September 1984. Areas of specialization are open but could include any of the following: sedimentary environments, petrography/diagenesis, paleogeography, tectonics, petroleum geology, stratigraphy. Our goal is to build an interactive group in sedimentary geology that complements existing strengths in micropaleontology, tectonics, geochronology, tectonics and geophysics. Rank and salary are open to the appointment level will be with the candidates' experience. The positions require a Ph.D. and a strong commitment to excellence in research and teaching. Teaching duties will involve advanced undergraduate and graduate courses in the area of sedimentary geology, possible participation in field camp, and supervision of M.S. and Ph.D. students.

UTD is a relatively new (13 years old) urban university that was formed from the nucleus of a research institution (Southwest Center for Advanced Studies). The campus is located near to three oil company research laboratories. Major facilities within the Geosciences Program include: Pione 350 computer with array processor, automated electron microprobe, SEM, two solid-state mass spectrometers, high-pressure, high temperature apparatus for experimental petrology and rock deformation, and organic geochemical laboratory.

Applicants should send a letter outlining specific research interests, a resume (indication of sex and ethnicity for Affirmative Action statistical purposes is requested but not required) and names of three references to:

Academic Search # 363
 The University of Texas at Dallas
 P.O. Box 830688
 Richardson, Texas 75083-0688

Applications should be received by February 1, 1984. The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

Hydrologist/University of Illinois at Urbana-Champaign. The Department of Geology is seeking a tenure-track or tenure position. The successful candidate will be expected to teach and supervise students in the department. The candidate should have a strong interest in obtaining and analyzing geophysical and meteorological data and be prepared to participate in studies. Specializations could include topics in atmospheric physics or fluid mechanics, cloud microphysics, basin evolution of paleoclimatology. The candidate would be expected to interact with such fields in the department as geophysics, meteorology, marine geology and geophysics, sedimentology, or chemical oceanography, and to participate in the Joint Program in Oceanography with the Woods Hole Oceanographic Institution.

Applicants should submit resume and list of references by November 15, 1983 to:

Academic Search # 363
 The University of Texas at Dallas
 P.O. Box 830688
 Richardson, Texas 75083-0688

Applications should be received by February 1, 1984. The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

Hydrologist/University of Illinois at Urbana-Champaign. The Department of Geology is seeking a tenure-track or tenure position. The successful candidate will be expected to teach and supervise students in the department. The candidate should have a strong interest in obtaining and analyzing geophysical and meteorological data and be prepared to participate in studies. Specializations could include topics in atmospheric physics or fluid mechanics, cloud microphysics, basin evolution of paleoclimatology. The candidate would be expected to interact with such fields in the department as geophysics, meteorology, marine geology and geophysics, sedimentology, or chemical oceanography, and to participate in the Joint Program in Oceanography with the Woods Hole Oceanographic Institution.

Applicants should submit resume and list of references by November 15, 1983 to:

Academic Search # 363
 The University of Texas at Dallas
 P.O. Box 830688
 Richardson, Texas 75083-0688

Applications should be received by February 1, 1984. The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

Hydrologist/University of Illinois at Urbana-Champaign. The Department of Geology is seeking a tenure-track or tenure position. The successful candidate will be expected to teach and supervise students in the department. The candidate should have a strong interest in obtaining and analyzing geophysical and meteorological data and be prepared to participate in studies. Specializations could include topics in atmospheric physics or fluid mechanics, cloud microphysics, basin evolution of paleoclimatology. The candidate would be expected to interact with such fields in the department as geophysics, meteorology, marine geology and geophysics, sedimentology, or chemical oceanography, and to participate in the Joint Program in Oceanography with the Woods Hole Oceanographic Institution.

Applicants should submit resume and list of references by November 15, 1983 to:

Academic Search # 363
 The University of Texas at Dallas
 P.O. Box 830688
 Richardson, Texas 75083-0688

Applications should be received by February 1, 1984. The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

Hydrologist/University of Illinois at Urbana-Champaign. The Department of Geology is seeking a tenure-track or tenure position. The successful candidate will be expected to teach and supervise students in the department. The candidate should have a strong interest in obtaining and analyzing geophysical and meteorological data and be prepared to participate in studies. Specializations could include topics in atmospheric physics or fluid mechanics, cloud microphysics, basin evolution of paleoclimatology. The candidate would be expected to interact with such fields in the department as geophysics, meteorology, marine geology and geophysics, sedimentology, or chemical oceanography, and to participate in the Joint Program in Oceanography with the Woods Hole Oceanographic Institution.

Applicants should submit resume and list of references by November 15, 1983 to:

Academic Search # 363
 The University of Texas at Dallas
 P.O. Box 830688
 Richardson, Texas 75083-0688

Applications should be received by February 1, 1984. The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

Hydrologist/University of Illinois at Urbana-Champaign. The Department of Geology is seeking a tenure-track or tenure position. The successful candidate will be expected to teach and supervise students in the department. The candidate should have a strong interest in obtaining and analyzing geophysical and meteorological data and be prepared to participate in studies. Specializations could include topics in atmospheric physics or fluid mechanics, cloud microphysics, basin evolution of paleoclimatology. The candidate would be expected to interact with such fields in the department as geophysics, meteorology, marine geology and geophysics, sedimentology, or chemical oceanography, and to participate in the Joint Program in Oceanography with the Woods Hole Oceanographic Institution.

Applicants should submit resume and list of references by November 15, 1983 to:

Academic Search # 363
 The University of Texas at Dallas
 P.O. Box 830688
 Richardson, Texas 75083-0688

Applications should be received by February 1, 1984. The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

Hydrologist/

Meetings (cont. from p. 621)

Announcements

Hydrology at AGU Fall Meeting

Modeling Aquifer Management

As part of a symposium on Optimization Techniques for Managing Groundwater and Stream-Aquifer Systems, there will be a panel discussion entitled "The Role of Simulation-Optimization Modeling in Aquifer Management." The symposium will be held on Thursday, December 8, 8:30-11:30 A.M., and the panel discussion will be held on Thursday, December 8, 12:15 P.M. The chairman of the session will be Manouche Heidari, Kansas Geological Survey.

Discussion will focus on issues such as: Can groundwater resources be efficiently managed? Are simulation-optimization models useful in the management of physically, economically, and legally complex aquifer systems? How can management modeling results be implemented? What elements of real systems have not been incorporated in these models? What should be the future direction of management modeling research? The panel members will be John D. Bredehoeft, Nathan Buras, Yacov Y. Hulmes, Thomas Madlock III, Gerald T. O'Mara, and Robert Willis.

Flood Risk and Streamflow

As a result of AGU's surface runoff committee's activities, several sessions at the 1983 AGU Fall Meeting will focus upon flood risk assessment, using statistical techniques and physically-based models, and also multivariate stochastic streamflow models. Of special importance are the two special sessions on Friday addressing recent flood-frequency research. The morning session on Statistical Procedures for Estimation of Flood Risk at Gage Sites, was organized by J. Stedinger. It contains papers by K. Potter, D. Hershfield, D. Wall, G. Marin, D. Lettenmaier, D. Newtun and J. Herrin. W. Thomas, and L. Beard.

On Friday afternoon, a special session organized by J. Valdes will address Searching for More Physically-Based Extreme Value Distributions. Papers will be presented by P. Todorovic, V. Gupta, M. Kavvas, R. Bras, and C. Helson. In addition, another 10 papers presenting flood-frequency research will be presented in a general hydrology session on Wednesday afternoon after the hydrology session luncheon. Topics to be discussed in the three sessions include flood measurement error, regionalization procedures, empirical Bayes analysis, WRC's Bulletin 17, use of historical flood information, scale and similarity, and derived distributions for ungaged catchments. The Friday sessions will close with a review, by J. Schaake, V. Klemes, and M. Moss, of recent accomplishments and research needs. Individuals interested in flood frequency analysis shouldn't miss this unique event.

Another special session will be on Thursday on Multivariate Modeling of Hydrologic and Other Geophysical Time Series, organized by J. Salas. D. Brillinger will give a keynote address. D. Valencia, J. Stedinger, V. Yevjevich, S. Camacho, I. Macneil, W. Lane, R. Hirsch, and D. Woolhiser, will present invited papers in the morning. Other papers will be given in the afternoon meeting and in the general hydrology session on Wednesday. The Thursday afternoon meeting will close with a discussion led by a panel consisting of M. Fiering, S. Burgess, A. Robinson, and D. Sheer.

Groundwater Instrumentation

The National Water Well Association (NWAA) will hold the Second National Symposium and Exposition on Groundwater Instrumentation in Las Vegas, Nev., April 2-4, 1984. Abstracts of papers for presentation at the meeting are due November 25.

NWAA invites soil scientists, hydrogeologists, hydrologists, geologists, engineers, and others working with instruments designed to study groundwater systems to attend and share research results. Paper topics include groundwater sampling devices and quality measuring devices; vadose zone measuring devices; devices for measuring water level; surface and borehole geophysical instruments; computer devices, data acquisition, and telemetry equipment; and contaminant detection and cleanup equipment.

Abstracts of 800 words or fewer should be sent along with a biographical sketch (no longer than 100 words) of each author, full mailing address, and phone number. For more information, contact David M. Nielsen, Conference Coordinator, NWAA, 500 W. Wilson Bridge Rd., Worthington, OH 43085 (telephone: 614-846-9335).

Eurogeophysics

The European Geophysical Society (EGS) will hold the Eurogeophysics Assembly July 29-August 4, 1984, at Louvain-la-Neuve, Belgium, with open sessions on external geophysics and geophysical fluid dynamics.

Symposium and workshop topics will include future planetary missions; structure of pre-Alpine orogenies; long-lived eddies in oceans and atmospheres; models of oceanographic mesoscale phenomena; magnetospheric effects of seismic activity; first results of European geophysics and solar experiments on Spacelab; convection phenomena in geophysics; geophysical, petrological, and structural aspects of large-scale tectonic phenomena; paleomagnetism, age dating, and sedimentology of young sediments; motions and physical processes in atmospheres and hydrospheres as revealed by remote sensing techniques; and aspects of climate.

For information, contact EGS General Secretary G. M. Brown, Dept. of Physics, University College of Wales, Aberystwyth, Wales, UK.

Marine 3-D Data

December 15 is the deadline for submitting abstracts to the 4th Biennial Series of Exploration Geophysicists/U.S. Navy (SEG/USN) Joint Technical Symposium on Three-Dimensional Marine Data Collection, Processing, Interpretation, and Presentation. The symposium, sponsored by SEG and the Office of Naval Research, will be held March 13-15, 1984, at the National Space Technology Laboratories in Bay St. Louis, Miss. A workshop on "Understanding and Interpreting 3-D Seismic Data Volumes" will be held March 13. Use of 3-D information in both shallow and deep marine applications is the theme for the symposium, which will include such topics as navigational accuracies required for 3-D data, benefits of collecting and presenting information in 3-D, 3-D case histories, techniques, instrumentation, upper ocean variability in 3-D, and tomography.

Only 28-30 abstracts, each of approximately 800 words, can be accepted for presentation. Abstracts should be submitted, along with a biographical sketch and a statement of the types of projection facilities required, to J. A. Ballard, Chairman, SEG/USN Technical Program, NORDA, NSTL Station, MS 39529 (telephone: 601-688-4760).

Plan To Attend

The AGU Chapman Conference on Natural Variations in Carbon Dioxide and the Carbon Cycle

Convenors: E. T. Sundquist and W. S. Broecker
January 9-13, 1983
Innsbrook
Tarpon Springs, Florida

Natural Variations in Carbon Dioxide and the Carbon Cycle will bring together geologists who are studying various aspects of carbon cycle history; geochemical models; and biologists, oceanographers, and meteorologists who are familiar with present and potential future relationships among the carbon cycle, atmospheric CO₂, and climate.

Questions to be discussed at this conference are: What caused the carbon cycle variations? How were they related to atmospheric CO₂? Were they associated with climate changes consistent with the CO₂/climate predictive models? What are the long-term geochemical implications of fossil fuel CO₂?

There will be sessions devoted to overview talks by experts on the application of ocean modeling, climate modeling, and the biosphere modeling to CO₂ as well as sessions emphasizing the geological record.

The meeting will be organized around six time slices: the last 2,000 years, the last 20,000 years, the last 2 million years, the Cenozoic, the Phanerozoic, and the Precambrian. Don't miss this exciting program!

Registration and housing information will be available by November 30. To be placed on a mailing list write: CO₂ Meeting, 2000 Florida Avenue, N.W., Washington, DC 20009 (202) 462-6903.

For program information contact: E. T. Sundquist, U.S. Geological Survey, 431 National Center, Reston, VA 22092 (703) 860-6083.

AGU FALL MEETING

December 5-9, 1983
San Francisco, California



Housing: Reservations will be accepted on a space availability basis only.

Send your housing form directly to the Housing Coordinator, AGU Fall Meeting, S.F. Housing Bureau, P.O. Box 5612, San Francisco, CA 94101.

Preregistration Deadline: November 10

There is still time to preregister. Save time and money! Send your preregistration form to the AGU Fall Meeting, 2000 Florida Ave., N.W., Washington, DC 20009.

Make your Airline Reservation: Call United

Dial the United toll free number 800-521-4041 (in Michigan, 800-482-0243). Give United your AGU Convention Number—4367—to ensure that you receive the AGU Discount Air Fare.

Registration and housing forms, the program summary, and airline information were published in *Eos*, October 18, 1983. For additional information, contact the AGU Meetings Department at 202-462-6903.

Rio Grande Rift

The New Mexico Geological Society is soliciting papers for a field-conference guidebook on the "Rio Grande Rift—Northern New Mexico." The annual field conference, the society's 85th, will be based in Taos, N. Mex., October 10-13, 1984. The conference will feature field trips to the Rio Grande Rift area, and guidebook papers should be relevant to the study of that region. There will be no oral presentation of papers.

Titles and descriptions of prospective guidebook papers are due December 1. The interest to a broad spectrum of earth scientists. Main topics will be the tectonics and magnetism of the Rio Grande Rift, which is a region of increasing international interest. Also among the topics are Precambrian geology, stratigraphy, sedimentology, paleontology, petrology, economic geology, geomorphology, hydrology, history, and archaeology.

The paper's title, with a short description, should be sent to either of the two coeditors: W. Scott Baldrige, Los Alamos National Laboratory, Mail Stop 1078, P.O. Box 1683, Los Alamos, NM 87545, or Pat Wood Dickerson, Gulf Oil International, P.O. Box 36506, Houston, TX 77236.

Geophysical Year

New Listings

A boldface meeting title indicates sponsorship or cosponsorship by AGU.

November 15-17, 1983 Symposium on Exclusive Economic Zone Mineral Development, Reston, Va. Sponsors: USGS, Mineral Management Service, and Bureau of Mines (Assistant Secretary, Energy and Minerals, Dept. of Interior, Washington, DC 20240; tel.: 202-343-5691).

March 13-15, 1984 Fourth Biennial SEG/USN Joint Technical Symposium on Three-Dimensional Marine Data Collection, Processing, Interpretation, and Presentation, National Space Technology Laboratories (NSTL), Bay St. Louis, Miss. (J. A. Ballard, Chairman, NORDA, NSTL, MS 39529; tel.: 601-688-4760).

April 29-May 4, 1984 Petrose Conference on Processes and Products of Multiscale Melting and Metasomatism in the Mantle, Gold Canyon Ranch, Ariz. Sponsors: Geological Society of America and USGS. (J. E. P. USGS, 345 Middlefield Rd., MS 75, Menlo Park, CA 94025).

AGU

Section Candidates

Eos is carrying biographies and photographs of all candidates for President-elect, General Secretary, and Foreign Secretary of the Union and for President-elect and Secretary of each Section. In addition, statements by the candidates for Union offices and for Section President-elect will appear. The sections and the date of the issue in which their material appeared are as follows:

Geodesy, Geomagnetism and Paleomagnetism August 30 and October 18
Planetary and Planetary Science September 27
Atmospheric Sciences October 11
Tectonophysics October 18
Seismology October 25

The slate of candidates for all offices was carried in the June 21 issue.

Ocean Sciences: President-elect

Arnold L. Gordon, A member of AGU since 1962; 43 years old. Professor of Oceanography at Columbia University at the Lamont-Doherty Geological Observatory, Palisades, New York. Major research interest is physical oceanography, particularly in regard to climate relevance of ocean circulation and mixing. B.A., Hunter College, 1961; Ph.D., Columbia University, 1965, with employment at Lamont-Doherty Geological Observatory to the present. Membership in AAAS, AGU, AMS and Sigma Xi. 77 publications, 18 in AGU publications; many dealing with the Southern Ocean circulation and water mass formation. Editor of 8 volumes. Recipient of the U.S. Antarctic Service Medal. Participation in many review panels; national and international committees. Associate Editor of JGR, 1973-1978; and since 1981, Editor of *Eos*, overseeing The Oceanography Report. Monthly *Eos* features devoted to the Oceanography AGU section.



Statement

"Oceanographers' educational backgrounds are very diverse, representing the broad range of science. Yet there is the common interest in the ocean that ties us together into a 'community.' The Ocean Sciences section of AGU provides this group with its only national, and, through interaction with other groups, international professional organization. The Section, through its meetings, and by its The Oceanography Report appearing in *Eos*, allows frequent exchange of ideas, research plans and results, as well as discussion of various professional concerns we might have. I will encourage, and whenever possible, enhance this vital role by recognizing current and future problems and opportunities. By acting as a facilitator for exchange of ideas, I hope to enable the membership of the Section to meet these new developments and challenges from a position of knowledge and strength.

"While my term as *Eos* Editor for The Oceanography Report ends in 1984, I will continue efforts to make it the focal point for physical, chemical, geological, and biological oceanographers."

"As the study of the ocean becomes more complex and global, and continued progress is dependent on rather sophisticated and expensive facilities with more stress on research group concepts, there is an increasing need for an active professional society, such as our Ocean Sciences Section of AGU. The Section can aid not only in the organization of the required resources, but also ensure that the creative individual, so important to our development, is not lost to the impending 'big science.'"

Donald V. Hansen, A member of AGU since 1963; 52 years old. Holds degrees in Physics (B.S., 1954) and Oceanography (M.S., 1961; Ph.D., 1964), from the University of Washington, Seattle. Served on active duty in USAR as Meteorological Officer and Artillery Officer during 1954-1956. Subsequently worked as an engineer in testing and evaluation for Boeing Airplane Company.

pany, and as a science teacher with Seattle Public Schools. Following graduate education held a position as Research Assistant Professor at the University of Washington before accepting a position as Research Oceanographer with the U.S. Department of Commerce. Has been director of the Physical Oceanography Laboratory, Atlantic Oceanographic and Meteorological Laboratories (AOML) since 1969, and additionally was Acting Director, AOML during 1978-1980. A member also of Sigma Xi, ASLO, AAAS, Florida Academy of Science, and International Oceanographic Foundation, and holds an appointment as Adjunct Professor at the University of Miami. Over 44 publications in oceanography, 3 of which appeared in AGU journals; numerous presentations and chairmanships of scientific sessions at the AGU meetings. Has published results of research on: warm circulation, tides, the Gulf Stream system, and continental shelf circulation. Has also published on the Gulf of Alaska and Beaufort Sea, and presently is working on circulation in the tropical Pacific Ocean. Received NOAA awards for distinguished scientific authorship in 1971, 1975, 1977, and 1980, and other NOAA awards. Served as Associate Editor, *Journal of Geophysical Research*, during 1966-1968, and has served on several special panels for AGU, NAS, and other organizations.

Ocean Sciences: Secretary

Barbara M. Hickey, A member of AGU since 1974; 37 years old. Research Associate Professor, University of Washington. Major interests: coastal and equatorial circulation, B.S.C. in mathematics and physics, University of Toronto, 1967; M.S. (1969) and Ph.D. (1975) in oceanography, Scripps Institution of Oceanography, University of California, San Diego. Research Assistant Professor, 1974-1980, University of Washington. Research Associate Professor since 1980. 12 refereed publications, 4 published by AGU. Oceanography Chairman for 1982 AGU Fall Meeting.



Membership Applications Received

Applications for membership have been received from the following individuals. The letter after the name denotes the proposed primary section affiliation.

Riad Al-Dabbagh (H), John M. Farr (H), Paul C. Fiedler (O), A. Russell Flegal (G), Nelson G. S. Freeman (O), Phyllis S. Greifinger (SM), Terry D. Kelly (SA), Alfred Kracher (P), David London (V), Stanley A. Mertzman (V), Masao Minagawa (V), Atsumu Ohmura (M), Robert A. Olson (S), Gerald T. O'Mara (H), William A. Robertson (GP), Guillermo Rodriguez (T), Derek Peter Smith (SM), Jack T. Siegmund (SA).

Student Status

Robin E. Bell (T), Greg N. Boinout (T), John A. Chmick (S), Kathleen Ann Devaney (V), Louis H. Esay (S), Sue A. Ferguson (M), Eric J. Fielding (T), Michael Folio (T), Ali Mohammad Ghazi (V), Keith A. Goetz (SS), Francis P. Kelly (O), Bruce T. Marshall (H), Frederic Mathieu (S), Marcel Nelson (P), Peng Fang (G).

Top Sponsors

One thousand eight hundred and two new members have been elected through September 30, 1983. The top sponsors, AGU members sponsoring three or more new members, are listed below.

Eight Members Robert T. Hodgson, Christopher N. K. Movers, Erwin Seibel.
Six Members Harold H. Demarest, Jr., Carl Kissinger, Karim Massoni, H. J. Seydoux-Morel, Paul E. Myers.

GAP

Separates

To Order: The order number can be found at the end of each abstract, or all digits when ordering. Only papers with order numbers are available from AGU. Cost: \$3.50 for the first article and \$1.00 for each additional article in the same order. Payment must accompany order. Deposit accounts available.

Send your order to:
American Geophysical Union
2000 Florida Avenue, N.W.
Washington, D.C. 20009

Aeronomy

0410 absorption and scattering of radiation measurements of the solar spectrum from the Solar Mesosphere Explorer satellite. The visible light spectrometer on board the Solar Mesosphere Explorer spacecraft measures atmospheric absorption and scattering of solar radiation in the 400- to 600-nm wavelength region and provides accurate daytime NO₂ density profiles with nearly complete latitudinal coverage over an extended period of time. The instrument and data analysis are discussed in detail and NO₂ results for winter/spring 1982 are presented and compared to ground-based observations. Agreement with ground-based measurements is good, and comparison with NO₂ model indicates that the overall agreement is acceptable. Improvements in the model are required before good agreement is reached at all latitudes. The data indicate that NO₂ has a strong memory of the physical conditions present in the stratosphere over a time period of several days. (Key words: J. Geophys. Res., Atmos., Paper 30464)

Exploration Geophysics

0110 Computer applications: INTEGRATION OF RELATED MANUAL TRANSFORMS BY CONVOLUTION AND CONTINUED FRACTION REDUCTIONS. The authors (University of Geophysics and Planetary Physics, Scripps Institution of Oceanography, University of California at San Diego, La Jolla, CA 92037).

An algorithm is presented for the accurate evaluation of the convolution of the kernel and the function, defined here as the non-linear function of the integrated, that is over a time period of several days. (Key words: J. Geophys. Res., Atmos., Paper 30464)

Lecturers for AGU Science and Policy Seminars Sought

AGU is establishing a series of Science and Policy Seminars. AGU members who have worked with public policy issues involving geophysics are invited to share with university students and faculty their experiences, insights, and expertise. For guidelines on this new and exciting program and application information, write or call:

AGU Member Programs
2000 Florida Avenue, N.W.
Washington, D.C. 20009
(202) 462-6903

Five Members Kevin Burke, John A. Ura-cup, Kazuya Fujita, Robert B. Smith.
Four Members Ernest J. Breeding, Jr., Laurie Brown, Robert L. Dabbs, John E. Ebel, John J. Gallagher, Jr., Louis I. Gordon, C. G. A. Harrison, Dennis S. Hodge, Ivan A. Johnson, L. A. Kivinen, John T. Kuo, Brian J. Mitchell, Larry J. Ruff, Charles G. Sammis, Edward Stolper, William J. Teague, Gordon M. Wolman.

Three Members Thomas J. Ahrens, Orson L. Anderson, Randall J. Charette, Richard G. Gordon, Richard H. Hawkins, George M. Hornberger, John E. Hubbard, Peter K. Kienast, John N. Ludden, William Berry Lyons, Monica W. Major, James S. McClain, Harlan L. McKim, David F. McIn-gue, Philip A. Meyers, Dennis O. Nelson, Robert M. Ragan, John H. Reynolds, Dietrich Hans Reeder, Michael Schulz, Leslie Smith, Urban A. Uotila, Francis T. Wu, David A. Yuen.

Book and Map
COMBINATION DISCOUNT
\$35

RIO GRANDE RIFT: TECTONICS AND MAGMATISM (1979)
Edited by R. E. Riecker

Geologic map of the Rio Grande Rift and Southeastern Colorado Plateau, New Mexico, and Arizona (1983) by W. S. Baldrige, Y. Barot, and A. Ron

30% DISCOUNT TO AGU MEMBERS